



PIER Energy System Integration Program Area

Distributed Generation (#733)

Contract #: 100-98-003 **Project #:** 2

Contractor: Gas Research Institute

Subcontractors: KN Services : Onsite Sycom Energy Corporation : AEC

Project Amount: \$41,000

Contractor Project Manager: Ron Edelstein (847) 768-0889

Commission Contract Manager: Scott Tomashefsky (916) 654-4896

Status: Completed

Project Description:

The purpose of this project is to identify the application characteristics and technical requirements for the strategic utilization of gas-fired distributed generation beyond the electric distribution substation. The tasks undertaken in this program include 1) preparing an economic assessment of the market potential for installing distributed generation units, 2) developing modeling tools to identify options available to customers, and 3) developing integrated interconnection systems.

This project supports the PIER Program objectives of:

- Improving the reliability/quality of California's electricity by utilizing natural gas-fired distributed generation technologies.
- Improving the public health costs/risks of California's electricity by advancing the use of low-emission natural gas.

Proposed Outcomes:

During 2000, the following tasks will be completed:

1. Provide benefits, impacts, and issues information from four field test applications.
2. Provide two advanced controls and communications systems for distributed generation.
3. Provide reports on infrastructure and interconnection system requirements, as well as communication protocol needs.

Actual Outcomes:

1. Provide benefits, impacts, and issues information from four field test applications:
 - Beta version of D-Gen Pro (Version 3) made available for user testing.
2. Provide two advanced controls and communications systems for distributed generation:
 - Installed a 1.2 MW gas turbine genset with novel communication/control equipment has been installed at Texas Tech.
 - A retrofit of the existing reciprocating engine facility at Lovelace Medical Center, a 235-bed, full service hospital, located in Albuquerque, New Mexico was recently completed. A new communication/control system was installed to enable the hospital to benefit from instantaneous interruptible electric power rates.
3. Provide reports on infrastructure and interconnection system requirements and communications protocol needs.

Project Status:

The project has been completed.